



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:
Nitzan Peleg, et al.

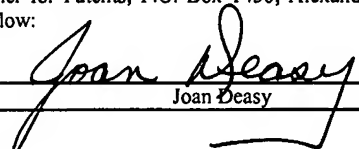
Serial No.: 10/690,762

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For: Method and Apparatus for
Refreshing Materialized Views

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§ Group Art Unit: 2167
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§ Examiner: Timblin, Robert M.
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February 4, 2008 Date	 Joan Deasy

**REPLY BRIEF PURSUANT TO 37 C.F.R. § 41.41 AND IN
RESPONSE TO THE EXAMINER'S ANSWER MAILED DECEMBER 11, 2007**

This Reply Brief is being filed pursuant to 37 C.F.R. § 41.41 and in response to the Examiner's Answer mailed on December 11, 2007. Specifically, this Reply Brief addresses the Examiner's continuing pattern of misinterpretation of Witkowski et al. U.S. Patent No. 6,125,360 (hereinafter "Witkowski") and the pending claims. However, in the interest of brevity, Appellants address below only those issues or arguments raised in the Examiner's Answer that are particularly noteworthy. In view of Appellants' attempt to avoid repetition in this Reply, Appellants respectfully request that the Board consider Appellants' complete arguments set forth in the previously filed Appeal Brief.

In the Examiner's Answer, the Examiner maintained the rejection of claims 1-4 under 35 U.S.C. § 101. Specifically, the Examiner asserted that claims 1-4 have been rejected under 35 U.S.C. § 101 "because no implementation of computer hardware is found in these claims." Examiner's Answer, page 14. In support of this position, the Examiner cited text in M.P.E.P. § 2106.01 referring to "computer programs claimed as *computer listings per se*," which "are not physical 'things.'" *Id.* However, the Examiner's reliance on this passage is misplaced. The present claims are not directed to a "computer listing." Indeed, each of claims 1-4 is clearly directed to a "system," as indicated by the respective preambles for each of the claims. Specifically, the claims indicate that a "system" (e.g., system 122), which Appellant asserts is a "physical thing," comprises "a materialized view," "a refresh log," and "a refresh manager." *See* Application, FIG. 3. A "system" is defined as "a group of devices or artificial objects or an organization forming a network esp. for distributing something or serving a common purpose." WEBSTER'S NINTH NEW COLLEGIATE DICTIONARY 1199 (1989). Accordingly, the Appellant believes the system recited in claims 1-4 includes sufficient structure to comply with M.P.E.P. § 2106.01. *See, e.g., In re Comiskey*, 84 U.S.P.Q.2d, 1670, 1680.

The Examiner also maintained the rejection of claims 1-30 under 35 U.S.C. § 102(b) as being anticipated by Witkowski. However, Appellants maintain the arguments with respect to the deficiencies of the Witkowski reference set forth in the Appeal Brief. Specifically, Appellants assert that the Examiner's argument that "database queries of columns 9 and 10" in Witkowski correspond to the recitation of "identifying a second subset of the plurality of entries from within the first subset of the plurality of entries, the second subset of the plurality of entries falling within a primary key value boundary," as recited in independent claims 1 and 5, is clearly incorrect. *See, e.g.,* Examiner's Answer, pages 4 and 16. The Examiner's reference to the "database queries of columns 9 and 10" apparently refers to two SQL queries described in columns 9 and 10 of Witkowski. *See id.* The first of these SQL queries appears to be the same query that the Examiner relied on for asserting that Witkowski discloses "successively reading a first subset." *See id.* Accordingly, it would not be appropriate to cite the same query for identifying a *second*

subset from *within the first subset*. Further, the second of the SQL queries, which is described at the top of column 10 of Witkowski, is merely an additional step that the system described by Witkowski requires to get actual changed data from a row-id of the changed rows acquired in the first SQL query. The second SQL query does not sub-divide the set of rows acquired in the first SQL query into smaller sets. Additionally, the second SQL query certainly does not sub-divide the set of rows acquired from the first SQL query into smaller sets according to a primary key value boundary, as set forth in claims 1 and 5. Accordingly, the reference cited by the Examiner clearly fails to disclose *all* of the features recited in claims 1 and 5.

In the Examiner's Answer, the Examiner also maintained that the recitation of an "epoch identifier" in each of independent claims 1, 5, 9, 16, 23, and 27 is described by the System Change Number (SCN) of Witkowski. However, as previously indicated in the Appeal Brief, the Appellants assert that an SCN is *not* an epoch identifier. According to Witkowski, an SCN is a logical number assigned to transactions in commit time order. *See* Witkowski, col. 9, lines 17-23. While the SCN described in Witkowski is not *exactly* a timestamp, it functions in much the same way as a timestamp. For example, as would be understood by one of ordinary skill in the art, the SCN is incremented in *every* transaction that gets executed in the system of Witkowski. *See id.* In contrast, an epoch identifier only changes when an actual refresh is performed. *See* Application, page 12, para. 0033. Accordingly, for example, in a succession of transactions that change a base table between invocations of the refresh operation, the refresh log rows corresponding to each such transaction would have different SCN numbers, but would have the same epoch identifier. Thus, Witkowski clearly fails to disclose *all* of the features recited in independent claims 1, 5, 9, 16, 23, and 27.

The Examiner also asserted in the Examiner's Answer that "the 'steps' in the claims can easily be construed as different invocations of the refresh operation rather than different transactions that are part of the same refresh operation." Examiner's Answer, page 18. However, Appellants respectfully disagree. For example, claim 1 recites "a

refresh manager that performs *a refresh operation* on the materialized view *in multiple steps*” prior to listing the steps in question. (Emphasis added). Similarly, claim 5 recites “performing *a refresh operation in multiple operations*” prior to listing the steps. (Emphasis added). Thus, it is clear that the Examiner misinterpreted the claims to mean different invocations of the refresh operation rather than different transactions that are part of the same refresh operation.

For each of the reasons set forth above and set forth in the previously filed Appeal Brief, Appellants respectfully request that the Board overturn the Examiner’s rejection of independent claims 1, 5, 9, 16, 23, and 27, as well as the claims that depending therefrom.

Conclusion

The foregoing are only reiterative points regarding the reasons why the pending claims are allowable. Appellants rely upon all of the reasons advanced in the Appeal Brief, and respectfully request that the Board carefully review the claims in view of these arguments and indicate the allowability of the claimed subject matter.

Respectfully submitted,

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